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SELECTION AND ASSESSMENT OF SPECIAL FORCES
QUALIFICATION COURSE CANDIDATES:
PRELIMINARY ISSUES

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> This research note seeks to provide a preliminary assessment of current methods of screening candidates for entry into the Special Forces Qualification Course (SFQC), and to examine the potential utility of alternative selection approaches. While the criteria for entry into the SFQC are extensive, they focus more on administrative issues and general training experience than on the qualities needed for success in the course, or on an operational detachment. No specialized selection program or battery is currently being used.		

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SELECTION AND ASSESSMENT OF SPECIAL FORCES QUALIFICATION COURSE CANDIDATES:
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SELECTION AND ASSESSMENT OF SPECIAL FORCES
QUALIFICATION COURSE CANDIDATES: PRELIMINARY ISSUES

INTRODUCTION

Special operations encompass some of the U.S. Army's most critical missions. Duties primarily involve participation in one or all of the interrelated fields of unconventional warfare, foreign internal defense, strike operations, strategic reconnaissance, and, for specific units, counterterrorism. Principal duties of the Special Forces asset, which is tasked with the first four missions, are usually performed by small operational team detachments consisting of two officers and ten enlisted men. The operational detachment works unilaterally or with foreign regular or irregular military forces. However, the detachment may also be part of a larger U.S. force. Each team is a complete unit, capable of organizing, training, and equipping a guerilla force of up to 1500 indigenous personnel. Since the Special Forces (SF) soldier is cross trained in at least two of the four specialty areas, a team can be divided in half and operate as two independent detachments of equal capability. Operational duties are characterized by independent actions, guided by unconventional tactics and initiatives. Assigned missions may require participation in waterborne, desert, jungle, mountain or winter operations (AR 611-201, 1987; George and Cassidy, 1981).

Basic qualifications for all SF Military Occupational Specialties (MOS) are rigorous. AR 611-201 requires that the SF soldier possess above average mental and physical abilities in addition to being proficient across a wide range of military skills. With regard to mental qualifications, potential SF candidates must possess effective oral communication skills, analytical ability, ability to recall detailed instructions, number facility, and a high degree of emotional stability to facilitate quick thought and action in rapidly changing situations involving personal hazard. Physically, the SF candidate must possess the stamina, agility, and endurance for the performance of strenuous tasks for prolonged periods of time.

In addition, the individual must have a thorough knowledge of conventional light infantry doctrine, low intensity conflict, unconventional tactics, principles of fire and movement, use of individual and light crew served weapons, protection from chemical and other contaminants, principles of first aid and field sanitation, map and aerial photo reading, land navigation, airborne operations, and infiltration/exfiltration techniques and procedures. Finally, all candidates must be airborne qualified.

Individuals interested in volunteering for Special Forces must successfully complete the Special Forces Qualification Course (SFQC). The SFQC provides the foundation upon which all subsequent specialized training is based. The SFQC is presently composed of three phases. Phase I emphasizes general subjects, effective teaching, leadership, patrolling, land navigation, and physical conditioning. This phase is four weeks long. Phase II focuses on specialized training within the individual (MOS). Each SF soldier receives extensive training in either communications, weapons, engineering or medicine. This phase varies from thirteen to thirty-eight weeks depending on specialty.

Phase III emphasizes special forces advanced training in the areas of doctrine and organization, unconventional warfare operations, direct action operations, methods of instruction, airborne and airmobile operations. A two-week unconventional warfare field training exercise and final exam complete the SFQC. Upon successful completion of the SFQC, the SF soldier is awarded his MOS and the green beret and is assigned to an A-detachment in the unit (SF group). Training continues in the A-detachment where additional mission specific skills such as language, advanced parachute techniques, and scuba are acquired.

While the qualifications for entry into the SFQC are extensive, no specialized selection battery is currently being used. Present screening procedures require the prospective SFQC candidate to take the Army Physical Fitness Test (APFT): situps, pushups, two-mile run, and a swim test; have a medical check up, possess a GT score of at least 110 and a secret security clearance. Additional criteria are also employed which focus more on administrative issues and general training experience (AR 614-200, Chapter 6, Section IV, 1980) than with specific qualities related to success in the course or on an operational detachment. Historically, a paper-and-pencil battery was used to screen personnel for mission aptitude but fell into disuse in the past decade.

Dissatisfaction with the existing screening process was evident in recent (August - October, 1986) discussions with SF department personnel who expressed concerns over what they considered excessively high attrition rates, approximately 40% - 50%, during the last 6 years. Whether the present attrition rate can be viewed as serious would seem to depend on first isolating the reason(s) why SFQC candidates are unable to get through the course. An attrition rate of 50%, for example, can be tolerated if unavoidable because of the rigorous training and standards. However, if the attrition rate can be reduced without lowering standards, then such an attrition rate is unacceptable.

As a result of the concerns mentioned above, the U.S. Army Research Institute-Fort Benning Field Unit (ARI-Benning) was tasked by the John F. Kennedy Special Warfare Center (JFKSWC) to provide a preliminary assessment of current screening procedures and recommendations for implementing a comprehensive selection program for screening candidates for entry into the SFQC. The general approach taken for the present pilot research was to construct profiles of successful and unsuccessful students completing Phase I of the SFQC based on both existing screening measures and paper-and-pencil measures believed to offer a valid means of discriminating between the two groups. The objective of this pilot investigation was to provide a preliminary assessment of the predictive utility of existing and selected screening variables and to use this information to direct future research in this area.

The task-skill breakdown provided by AR 611-201 (1987) suggested three general classes of predictors for initial evaluation: intelligence, personality, and physical fitness. These three dimensions are supported by the Special Warfare Center staff psychologist. Since Armed Service Vocational Aptitude Battery (ASVAB) composite scores were available for many of the

students, this data was collected and served as a fourth class (aptitude) of predictor variables.

METHOD

Subjects

Subjects included 339 soldiers attending the Special Forces Qualification Course (SFQC) at Fort Bragg, North Carolina during the September 1986 - January 1987 time period, 57 soldiers from the 197th Infantry Brigade at Fort Benning, Georgia, and 19 group qualified (A-Team) Special Forces soldiers from Fort Bragg. Table 1 summarizes the major characteristics of the samples. The last two samples were included to provide anchors from which to make comparisons with the SFQC sample. However, in order to satisfy JFKSWC's request to have a preliminary selection plan ready for presentation by the end of January 1987, further data could not be collected on the 197th and A-Team samples. Therefore, any reported differences among these groups should, at this time, be considered suggestive. In the tables and text that follow, the numbers of cases vary because the full set of measures was not gathered from all of the participants.

Table 1

Biodata Profile of the SFQC, A-Team, and 197th Infantry Brigade Samples

	<u>SFQC</u>		<u>A-Team</u>		<u>197th</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Age (years)	26.8	4.9	29.5	5.2	23.8	4.6
Height (inches)	70.0	2.8	70.9	2.6	70.3	2.8
Weight (pounds)	170.2	19.3	178.2	18.2	172.0	21.5
Education (years)	13.5	1.9	13.4	1.6	12.8	1.7
Time in Service (months)	82.0	50.3	119.3	57.6	51.0	35.0

Note: Ns were 306 for the SFQC, 19 for the A-Team, and 56 for the 197th Infantry Brigade samples.

Materials

Wonderlic personnel test. Extensive discussions with the Special Forces department clinical psychologist at Fort Bragg indicated that a measure of intelligence was appropriate, and that reliance on the ASVAB GT score, for

example, as the principal measure of intelligence was unsatisfactory. After further consultation with Auburn University Department of Psychology faculty members, the Wonderlic Personnel Test (WPT) was selected as the primary instrument to assess general intellectual capacity.

The WPT was created for adult testing in business and industrial situations (Wonderlic and Associates, 1983). Its primary application has been in personnel selection (Murphy, 1984) and it has been found to be highly predictive of success in learning situations. The WPT consists of a broad range of problem types. The 50 items are mixed and consist of analogies, arithmetic computations, syllogisms, definitions, logic, analyses of geometric figures, proverbs, scrambled sentences, judgments, perceptual skills items, spatial relations, etc., and are arranged in an increasing order of difficulty (spiral omnibus format). Most questions require a respondent's choice from an array of responses, while others require the answer to be a word or number not yet presented. The WPT has a 12 minute time limit.

Jackson personality inventory. Discussions with SF department personnel and the Fort Bragg clinical psychologist indicated that a number of individuals graduating from the SFQC, while technically competent, simply did not possess the temperament to operate effectively on a small operational team detachment. After further consultations with the Fort Bragg and Auburn University psychologists, the Jackson Personality Inventory (JPI) was selected as the candidate instrument best able to assess those interpersonal qualities likely to underlie success in certain aspects of the SFQC and general suitability for inclusion on small operational team detachments. The JPI consists of 15 scales (300 items) reflecting a variety of interpersonal, cognitive, and value orientations believed to have important implications for a person's functioning (anxiety, breadth of interest, complexity, conformity, energy level, innovation, interpersonal affect, organization, responsibility, risk taking, self esteem, social adroitness, social participation, tolerance, value orthodoxy). Items are presented in a true-false format (Jackson, 1976).

Myers - Briggs type indicator. Based on the results of the task analysis presented earlier and on pilot research with Ranger reconnaissance teams, a second personality measure, the Myers-Briggs Type Indicator (MBTI), was selected as an additional measure of temperament. The MBTI (Myers and McCaulley, 1985, Form G) is a 126-item instrument based on the Jungian Archetypal theory and is designed to measure the way people perceive and judge things, people, events, or ideas. Perception and judgment are assessed through four bipolar dimensions: extraversion-introversion, E-I (reflects preferences for people versus ideas); sensing-intuition, S-N (preference for working with known facts versus looking for possibilities and relationships); thinking-feeling, T-F (preferences for basing judgments on impersonal analysis and logic versus personal values); and judging-perceptive, J-P (opting for a planned, orderly way of life versus a flexible, spontaneous way). An individual's standing on the four dimensions constitutes a type (e.g., ISTJ, ENFP). There are 16 possible combinations or "types". Items are presented in a forced choice format.

Biographical questionnaire. The biographical questionnaire is a 14-item instrument designed to provide information concerning educational level,

component (active-reserve), time in service, rank, specialized training received, MOS, marital status, and career plans. These areas were selected for their potential as subgrouping variables.

Procedure

The samples were tested separately over a three month period. Once approval was received for representatives from (ARI) to administer the instruments described above, a testing time was arranged. Prior to the actual administration of the instruments, subjects were given a general explanation of the research objectives and each of the test instruments was briefly described. Subjects were also told that the present data collection effort was for research purposes only and that their responses would not affect their status in the course. The instruments were administered in the following order: Wonderlic Personnel Test, Jackson Personality Inventory, Myers-Briggs Type Indicator, and the Biographical questionnaire. Total administration time was approximately two hours.

RESULTS

Preliminary Profile Development

Descriptive profiles were constructed both for soldiers who passed the first phase (Phase I) of the three-phase SFQC and those who did not. The previously mentioned deadline imposed by JFKSWC allowed only enough time to monitor students through the first phase of the course. The time constraints also limited the choice of criteria. For this exploratory research, the single criterion of Phase I status (successful-unsuccessful) was employed. Profiles were based on the personality, intelligence, aptitude (ASVAB), and selected biographical measures described earlier, along with physical fitness measures (two-mile run, situps, and pushups) obtained from the standard AFPT administered two days prior to the start of the SFQC. Personality and intelligence measures were collected from the two additional samples, SF A-Team members and non-SF 197th Infantry Brigade soldiers. For this research, the SF A-Team sample served as the positive exemplar for the "successful SF soldier" and the 197th Infantry Brigade sample served as the non-SF combat arms military standard. Analysis of variance (ANOVA) and chi-square tests were performed on these three samples to judge the appropriateness of the selected variables for inclusion in a specialized selection battery. This analytic strategy was similar to the one employed by George and Cassady (1981) in their research on SFQC attrition, and was intentionally selected to simplify the comparisons between the findings of the two studies.

Discussions with both ARI and Special Warfare Center staff members suggested that the component (active-reserve) variable could be useful in further delineating the relationships between the predictor variables and Phase I status. Thus, for this pilot investigation, the data was broken down further to take into account the student's component designation. For this initial research effort, only the general findings of this subgrouping variable will be reported.

For the SFQC sample, of the 338 students for which Phase I performance data was available, 228 (67.4%) passed and 110 (32.5%) failed. The success rates for the active and reserve components were comparable, 69.0% versus 67.7%, respectively. The major reason for failure during Phase I was an inability to pass the land navigation section of the course. This accounted for 83.6% of the failures. Including those students (approximately 50) who failed the AFPT and thus were eliminated from the course, the overall success rate for Phase I dropped to 58.7%.

Aptitude (ASVAB). The ASVAB data were broken down on the basis of component and Phase I status (either successful or unsuccessful). Successful active component students scored significantly higher, $p < .05$, on five of the ten ASVAB scales (general maintenance, combat, field artillery, operators and food, and skilled technical) using the Bonferroni correction for multiple F-tests (Cohen & Cohen, 1983). For active component soldiers, the successful students scored 5-8 points higher than the unsuccessful students on all ASVAB scales (See Table 2). In contrast, no significant group differences were obtained for reserve component students (Table 2). The scores for both successful and unsuccessful reservists were essentially identical across the ten ASVAB scales.

Physical fitness. Both successful active and successful reserve component students scored higher on all three fitness measures than did the unsuccessful students. However, using the more stringent Bonferroni alpha level of .01, these differences were not statistically significant (Table 3).

Intelligence. Analysis of the component by status breakdown for Wonderlic scores yielded no significant group differences. While only suggestive, the A-team sample scored significantly higher, $p < .05$, ($M = 26.7$) than did both the active-successful ($M=24.2$) and active-unsuccessful ($M= 23.3$) groups. Overall, the mean range of scores for the SFQC corresponded to IQ scores of approximately 100-120. See Table 4.

The WPT data were also analyzed from an alternative perspective. Based on both mission requirements and training potential, three cutoff (minimum) WPT scores were examined. According to Wonderlic et al. (1983), individuals who score in the 26-30 range are able to both analyze and make decisions from a limited number of choices. They also have the ability to learn on their own by independent study and are able to gather and synthesize information easily, as well as infer conclusions and information from on-the-job situations. Since these qualities seemed to underlie the basic requirements listed in AR 611-201 (1987), i.e., quick thought and action in rapidly changing situations, an initial WPT cutoff range of 26-28 correct for all SF candidates, collapsing across component, was established.

Forty-one percent ($n = 79$) of the 192 soldiers for whom Wonderlic scores were available scored 26 or higher on the WPT. The overall success rate of those who scored 26 (the minimum score examined) or higher was 67%, compared to a success rate of 58% for those soldiers who scored below 26 on the WPT. The overall correlation obtained between the full range of WPT correct scores and Phase I status was .13, $p < .10$.

Table 2

Mean ASVAB Scores for Successful and Unsuccessful Phase I SFQC Students by Component

<u>Scale</u>		<u>Active</u>		<u>Reserve</u>	
		<u>Successful</u>	<u>Unsuccessful</u>	<u>Successful</u>	<u>Unsuccessful</u>
General Technical	M	120.9	115.9	120.6	120.6
	SD	9.4	6.9	10.9	8.2
General Maintenance	M	118.7	110.4	119.3	120.0
	SD	9.9	11.7	11.8	8.6
Electronics	M	118.2	112.9	120.0	120.0
	SD	8.0	10.2	11.6	7.5
Clerical	M	117.4	112.0	119.9	117.9
	SD	13.1	8.7	9.9	9.5
Mechanical Maintenance	M	117.9	111.2	121.1	119.5
	SD	9.9	12.9	14.8	10.7
Surveillance and Communication	M	118.7	112.7	120.3	119.4
	SD	10.9	9.8	8.6	10.5
Combat	M	121.1	112.8	123.3	120.4
	SD	12.8	11.2	10.1	11.5
Field Artillery	M	119.2	112.8	120.5	120.3
	SD	10.0	10.6	10.6	9.6
Operators and Food	M	120.7	112.4	120.5	120.4
	SD	10.1	14.3	10.7	9.5
Skilled Technical	M	118.9	111.0	116.3	121.0
	SD	10.2	10.8	20.3	7.0

Note. Ns ranged from 94-96 for the active successful-unsuccessful and 63-64 for the reserve successful-unsuccessful samples.

Table 3

Mean AFPT Scores for Successful and Unsuccessful Phase I SFQC Students by Component

		<u>Active</u>		<u>Reserve</u>	
		<u>Successful</u>	<u>Unsuccessful</u>	<u>Successful</u>	<u>Unsuccessful</u>
<u>PT Measure</u>					
2-mile run					
	M	92.5	89.5	92.3	89.4
	SD	7.3	9.7	7.7	8.4
Situps					
	M	83.8	78.7	82.5	80.7
	SD	13.7	13.6	12.8	13.6
Pushups					
	M	83.7	81.7	83.7	82.0
	SD	12.2	11.1	11.6	12.9

Note. Ns were 160 and 106 for the active and reserve components, respectively. Scores are based on a 100-point scale.

Table 4

Mean Wonderlic Scores for A-Team and Successful and Unsuccessful Phase I SFQC Students by Component

<u>Score</u>	<u>Active</u>		<u>Reserve</u>		<u>A-Team</u>
	<u>Successful</u>	<u>Unsuccessful</u>	<u>Successful</u>	<u>Unsuccessful</u>	
M	24.2	23.3	27.1	24.7	26.7
SD	5.3	6.4	6.1	5.3	4.0

Note. Ns were 78 and 52 for the active successful-unsuccessful, 41 and 22 for the reserve successful-unsuccessful, and 19 for the A-Team samples.

Personality. Means were calculated for each of the four dimensions of the Myers-Briggs Type Indicator (MBTI) by component and SFQC status. Analyses showed that the groups did not significantly differ from each other in their preferences. Comparisons between the A-Team sample's scores on each of the four MBTI dimensions and those from the SFQC suggested that the A-Team members were more likely to be characterized as thinking preference types than all other soldiers (active successful/unsuccessful, reserve successful/unsuccessful), $p < .01$, for the successful active/reserve comparisons.

The MBTI scores were further broken down into each of the sixteen possible personality types. The percentages of successful and unsuccessful Phase I SFQC students were calculated for each type (Table 5). For those students who had taken the MBTI ($n = 162$), the overall success rate was 61%. Separate contingency chi-square tests were computed between Phase I status (successful-unsuccessful) and each of the following configurations: (1) general type (16 types), e. g., ISTJ, ENTP; (2) subtype (24 subtypes), e. g., ST, SF, SJ, SP; (3) component (8 components), i. e., S, N, T, F, I, E, J, P; and (4) most frequent type (ISTJ) versus all other types. The results from these analyses showed Phase I status to be independent (non-significant) of MBTI preference. Approximately 26% (25.93%) of all the students fell into the ISTJ type.

The mean Jackson Personality Inventory (JPI) profiles obtained for the A-Team and 197th Infantry Brigade samples appeared to be quite similar, although no statistical comparisons were made. The results are shown in Table 6. The JPI was not available for administration to the SFQC sample.

Table 5

Percentage of Successful and Unsuccessful Phase I SFQC Students
For Each MBTI Personality Type

<u>MBTI Type</u>	<u>% Successful</u>	<u>% Unsuccessful</u>	<u>N (162)</u>
ISTJ	57	43	42
ISTP	79	21	14
ISFJ	67	33	3
ISFP	100	0	1
INTJ	46	54	13
INTP	69	31	16
INFJ	50	50	6
INFP	00	100	1
ESTJ	67	33	24
ESTP	56	44	9
ESFJ	75	25	8
ESFP	50	50	2
ENTJ	70	30	10
ENTP	40	60	5
ENFJ	50	50	2
ENFP	50	50	6

Table 6

Mean JPI Profiles for 197th Infantry Brigade and A-Team Samples

<u>JPI Scale</u>	<u>197th</u>		<u>A-Team</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Anxiety	9.4	3.6	7.3	3.5
Breadth of Interest	10.2	3.6	12.0	4.7
Complexity	8.4	2.4	8.4	2.5
Conformity	6.6	3.1	5.1	3.4
Energy Level	12.2	3.5	15.1	2.3
Innovation	12.3	2.9	12.3	4.5
Interpersonal Affect	9.2	3.6	6.5	4.0
Organization	11.6	3.1	13.3	3.2
Responsibility	10.9	3.7	12.4	3.5
Risk Taking	10.6	3.0	11.4	3.7
Self-Esteem	12.7	3.5	13.9	3.4
Social Adroitness	9.7	2.6	8.5	3.1
Social Participation	9.2	3.3	6.6	5.7
Tolerance	10.1	3.0	11.6	3.2
Value Orthodoxy	10.7	3.0	9.6	2.6
Infrequency	3.1	3.4	.9	.9

Note. Ns ranged from 56-57 for the 197th to 19 for the A-Team samples.

DISCUSSION

The empirical evidence gathered in this exploratory investigation is suggestive at best. The time constraints imposed on the research restricted the data collection process and limited the available experimental designs which could have been employed. This research effort did, however, underscore a variety of issues which must be addressed if a valid selection plan is to be developed.

Based on the most recent task analysis of the Special Forces MOS series, three general classes of predictor variables (intelligence, physical fitness, personality) along with a fourth class (aptitude) were examined to determine their feasibility for inclusion as part of a Special Forces Selection Battery. Three of the four classes of predictor variables: intelligence, physical fitness, and aptitude, showed trends which may be worthy of further investigation. The personality predictors (MBTI, JPI) did not show any systematic relationship with Phase I status. This was particularly true for the MBTI. The primary instrument of choice, the JPI, could not be administered to the SFQC class since the order for additional test booklets and answer sheets was late in arriving for the scheduled testing date. Intuitively, the JPI is appealing, but further evaluation of the instrument will have to be delayed until a second pilot study can be conducted to assess its utility more adequately.

The MBTI, while initially promising from a construct perspective, is highly complex and has proven to be difficult to relate to specific training variables or performance on an operational team detachment. After further consultation with Auburn University faculty members, it was decided that the MBTI will be dropped as one of the personality measures for future validation research.

The information provided by the JPI or any other relevant personality measure may be of limited value when the criterion is Phase I status. The highly structured nature of Phase I, where the course content is clearly laid out and students are reasonably certain of what behaviors are expected of them, creates a potent set of guidelines for appropriate individual behavior. These situations, as described by Gatewood and Feild (1987), are viewed as "powerful" to the extent they lead individuals to interpret particular events in the same way, create uniform expectancies regarding the most appropriate behavior, and require skills that everyone possesses roughly to the same extent. Under such conditions, individual behavior is hypothesized to be more attributable to the known situational role (e. g., student) than to individual traits.

However, "weak situations", i. e., situations which are always changing, where there is no one correct solution and where a variety of skills may produce differing degrees of success, would allow personality to exert more of an influence on individual behavior. Under these conditions, if individuals are uncertain as to appropriate behavior, the individual is assumed to interpret the situation and act in accordance with his own personality traits (Gatewood & Feild, 1987). Thus, personality measures may be more appropriately utilized as a means of assessing an individual's suitability for inclusion on

an operational detachment (weak situation) than future performance in the SFQC (powerful situation).

Prediction Across Phases

The fact that each of the three phases of the SFQC stresses different activities with different objectives suggests, at least intuitively, that future validation research should cover all phases of the SFQC. However, since the failure rates in Phases II and III are only about 5-7%, it may be more cost effective to focus on identifying those factors most related to success in Phase I. In any event, further work will be required in identifying criteria, e. g., paper-and-pencil tests in particular subject areas, and work samples, which appear to be logically related to the selected predictor measures. With regard to Phase I, this will require a careful examination of the relationships between the six criteria presently employed in Phase I: map-reading, land navigation FTX, confidence course, patrolling exam, patrolling FTX, and actual performance as a patrol member, and the predictor measures originally identified from the task analysis. Subsequent research should help fine tune the choice of measures for inclusion in the final SF selection battery.

Realistic Job Previews

In an earlier research report by George and Cassady (1981) examining factors affecting the attrition rate in the SFQC, the authors attributed a large percentage of the attrition rate to a lack of information on the mission objectives of Special Forces, i. e., course candidates did not have a clear idea of what Special Forces was about or the requisite skills necessary to successfully complete the SFQC. As was the case in this research, the majority of individuals who were unsuccessful in Phase I of the George and Cassady study had problems in land navigation. The relatively high attrition rate in the SFQC attributed to land navigation could be significantly reduced if potential candidates knew, in advance, that they had to be proficient in this and other basic military skills prior to entering the course. Since land navigation is a highly perishable skill which many candidates probably had not practiced in some time, the provision, in advance, of relevant course information could potentially have a significant impact on attrition by insuring that the candidates arrive at the course proficient in all requisite skills. As it is currently structured, land navigation instruction offered during Phase I assumes that the individuals have been exposed to the basic concepts and can presently navigate. This apparently has not been the case. Even though the course content does not exceed skill level I difficulty, the majority of students are simply unable to consistently demonstrate proficiency in land navigation in the time period (approximately 68 hours for classroom instruction, exams, and retests) allotted to this skill during Phase I.

Clearly, the course requirements must be spelled out more forcefully prior to the candidate coming to the SFQC to insure that he understands what will be expected of him. The idea of providing pamphlets, i. e., realistic job previews (Premack & Wanous, 1985), which clearly describe the mission objectives of Special Forces and the requisite skills for the SFQC was presented to the JFKSWC and accepted by the sponsor as a reasonable means of accomplishing this objective.

Screening. Providing SFQC candidates with sufficient course information prior to volunteering and physically moving to Fort Bragg (site of the SFQC) is potentially quite cost effective. The advanced information allows individuals to self-select themselves in or out of consideration, thus insuring to some degree that those who do decide to volunteer will be more prepared. However, there is still the possibility that individuals will be admitted into the course who are neither technically proficient nor psychologically capable of operating in the SF mission environment. Based in part on this rationale, the Deputy Assistant Commandant of the JFKSWC has proposed a three-week selection phase called Special Forces Orientation Training (SFOT). This phase has been approved, and will be piloted in June 1988. The purpose of this phase is to run SFQC candidates through a series of exercises tapping the candidate's physical endurance and stamina, ability to work in small teams, and team relevant traits (motivation, responsibility, and stability), along with obtaining actual work samples of candidates' proficiency on such requisite SFQC skills as land navigation. In addition, paper-and-pencil measures of intelligence and personality will be obtained.

In concept, the SFOT has merit, since it would (hopefully) identify those individuals who had slipped through the earlier passive screening stages into the SFQC. The high cost of sending an individual through the SFQC, roughly \$250,000, was a major consideration leading to the proposed establishment of the SFOT. However, to be truly effective as a screening tool, extensive preliminary work will have to be done. For example, how will the selected personality traits be operationalized for the team exercises? How will these traits be assessed? How many assessors will be required? How will they be trained? What training criteria will the selected predictor variables be related to? If good measures of these training variables are not available, can they be developed? How will the relationship between performance during the SFOT and actual performance on an operational detachment be assessed?

In summary, what has been proposed is a field assessment center methodology (Moses & Byham, 1977) which will include simulated exercises to assess certain basic qualities necessary to operate effectively on small teams, physical fitness, proficiency in basic military skills (land navigation), and paper-and-pencil measures of intelligence (WPT) and personality (JPI).

The costs (time, money, and personnel) of operating the proposed program could be extensive. An accurate evaluation of the system must incorporate these costs into the final assessment. This concern has been noted to the sponsor. Work is now underway focusing on the identification and operationalization of key traits, development of field exercises designed to tap these qualities, development of behaviorally based rating scales to assess behavior, and the development of a training program to train assessors in the use of the rating scales and how to objectively appraise performance in the field exercises.

Utility Considerations

The utility of a selection battery depends not only upon the validity of a given selection measure, but also on two other parameters: the selection ratio (the ratio of the number of available job openings to the total number of

available applicants) and the base rate (the proportion of persons judged successful using current selection procedures). The interaction of these three parameters ultimately determines the success ratio (the proportion of selected applicants who are subsequently judged successful). As Cascio (1982) points out, when the selection ratio drops, i. e., approaches zero, the predictor's value (the increment in the percentage of correct decisions) increases across the range of validity values. Also, as the baseline departs from .50, in either direction, the value of a given predictor declines, i. e., the increment in the percentage of correct decisions made based on the information from a given predictor becomes smaller.

Of the two parameters mentioned above, the selection ratio appears to be especially critical given the current personnel shortages in Special Forces. A number of the Special Forces groups are chronically undermanned, with the gap widening as more slots become available through the establishment of a new group and attrition continues within the existing groups. Thus, the selection ratio can be expected to increase over the next few years unless recruiting efforts can be stepped up to attract more qualified candidates. This will make it increasingly difficult to demonstrate real gains from the proposed selection system over existing screening procedures, particularly if the base rate increases from its present level.

Another factor which may require some thought concerns the value/costs of making certain selection decisions. For example, is it more serious to accept a SF candidate erroneously than it is to reject one erroneously? In the classical validity approach, i. e., constructing the best selection battery yielding the highest multiple R between predicted and actual criteria scores, both kinds of decision errors are treated as equally costly. Yet, in most practical selection situations, organizations attach different utilities to these outcomes (Cascio, 1982). The implications of these decisions as they apply to training, recruiting costs, and strategies need to be explored further.

Initial discussions with SF personnel in this area have been useful in shaping the objectives of the SFOT. It was clear from the discussions that the major concern was how to minimize false positives, i. e., erroneously accepting a candidate into the course and ultimately into SF. This was viewed as a far more serious error than rejecting a potentially successful candidate. As a result, the focus of the SFOT has been directed at screening out only those individuals who should not be in SF in the first place. As long as the candidate does not fall into this bottom category, he will be regarded as "acceptable" and allowed into the first gate, the SFQC.

In summary, the effectiveness of a selection system must be evaluated on factors other than just the validity coefficient alone. More specifically, the value of the proposed selection system needs to be looked at from the additional perspective of how the system improves decision making accuracy. The factors mentioned above will have to be addressed thoroughly in examining the utility of a specialized SF selection battery.

Conclusions

Several of the findings of the George and Cassady (1981) study on SFQC attrition paralleled those obtained from the present research. Like the previous study, attrition in Phase I of the SFQC fell roughly in the 40% range. Attrition in the remaining two phases was minimal, 5-7%. Land navigation accounted for the majority of the failures in Phase I.

George and Cassady did not recommend the establishment of a specialized selection battery. They felt that the candidates were more than qualified given both their ASVAB scores and their general suitability on the administrative criteria. They showed that raising the cutoff scores on several of the ASVAB composites did not increase the success rate but, in fact, resulted in fewer potentially successful candidates being selected for the course. Given the problem of trying to fill the groups, even in 1981, this solution (raising cutoff scores on selected ASVAB composites) was clearly unacceptable.

One of the solutions offered by George and Cassady to reduce attrition, and endorsed by the present authors, is to provide candidates with as much advanced information on SF (and SFQC requirements) as possible to insure that they know what is expected of them prior to coming to the SFQC. While providing realistic job previews and improving training conditions (another recommendation by George and Cassady) may, in fact, reduce attrition, it still does not address the entire problem.

Attrition in Phase I is only one part of the problem. The more critical issue, according to Special Warfare Center personnel, is how well these individuals can function on an operational detachment. This is hopefully where the SFOT situation reaction exercises in conjunction with selected paper-and-pencil personality measures will prove useful in identifying those individuals who can work as members of a small, cohesive, highly skilled team.

The reasoning behind the SFOT assessment phase is sound. However, it is clear that a great deal of work will be required to insure that the SFOT accomplishes what it was set up to do, namely to select competent individuals who are capable of combining their talents to function as an effective operational detachment.